

WHAT IS CLAIMED IS:

1. A multibeam exposure apparatus which exposes a substrate by using a plurality of charged-particle beams, comprising:

5 a deflection member which deflects an incident position of each of the plurality of charged-particle beams on the substrate;

a generation member which generates pattern data to be projected onto the substrate; and

10 a correction member which corrects a positional error of each of the plurality of charged-particle beams by said deflection member and said generation member.

2. The apparatus according to claim 1, wherein when
15 each of the plurality of charged-particle beams is deflected to a predetermined exposure position on the basis of the pattern data, said correction member corrects a static positional error independent of a deflection position by said deflection member, and
20 corrects a dynamic positional error dependent on the deflection position by said generation member.

3. A multibeam exposure method of exposing a substrate by deflecting each of a plurality of charged-particle beams to a predetermined exposure
25 position, comprising:

a first correction step of correcting a positional error of each of the plurality of

charged-particle beams by independently deflecting a position of each of the plurality of charged-particle beams; and

a second correction step of correcting the
5 positional error of each of the plurality of charged-particle beams by generating pattern data to be projected onto the substrate.

4. The method according to claim 3, wherein in the first correction step, a static positional error
10 independent of a deflection position is corrected when each of the plurality of charged-particle beams is deflected to a predetermined exposure position on the basis of the pattern data, and in the second correction step, a dynamic positional error depending on the
15 deflection position is corrected.

5. A method of manufacturing a device by using an exposure method defined in claim 3.

6. An exposure apparatus which exposes a substrate by using a plurality of charged-particle beams on the
20 basis of pattern data, comprising:

a deflector array which deflects an incident position of each of the plurality of charged-particle beams on the substrate so as to correct a first component out of the positional error of each of the
25 plurality of charged-particle beams; and

a controller which generates the pattern data so as to correct a second component out of the positional

error of each of the plurality of charged-particle beams.

7. The apparatus according to claim 6, further comprising a main deflector which deflects the
5 plurality of charged-particle beams at once,
wherein the first component contains a static distortion independent of deflection by said main deflector, and the second component contains a dynamic distortion dependent on the deflection by said main
10 deflector.

8. A device manufacturing method comprising steps of:

exposing a substrate by using an exposure apparatus defined in claim 6; and
15 developing the exposed substrate.